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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,884

09/24/2003

Bradley W. Smith

AAI-14305

5266

45483

7590

07/07/2006

AUTOLIV ASP, INC
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EXAMINER

CULBRETH, ERIC D

ART UNIT

PAPER NUMBER

3616

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/669,884		SMITH ET AL.	
	Examiner		Art Unit	
	Eric Culbreth		3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 43-44, 48-50, 54 and 59 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al US006908105B2, of record.

Yamazaki et al disclose an inflation assembly for an air bag comprising a first chamber 20 with pyrotechnic gas generating material (column 10, lines 52-81), which would produce heat, and an initiator 26 initiating reaction of at least a portion of material 21. A diffuser chamber 30 has a first and second end. The first end of diffuser chamber 30 adjacent first chamber 20 is in gas flow communication with the chamber upon activation of initiator 26, and the diffuser chamber 30 discharges gas into the airbag through openings 32. A gas treatment element or filter 35 is disposed within the diffuser chamber 30 (note column 8, lines 53-58) for treating gas being discharged into the air bag. A gas storage chamber 14 stores a source of compressed gas in a static state (note column 9, lines 15-39, where chamber 14 stores a pressurized medium or liquefied gas). Upon actuation the second chamber 14 is openable so that the contents are in gas communication through the second end of the diffuser chamber 30 (the end adjacent chamber 14) and the filter 35. A chamber opener 34 is effective upon actuation of the inflation assembly to open second chamber 14 and release the chamber's contents into gas flow communication with the diffuser chamber 30 and the

treatment element 35 disposed therein. As functionally recited, the gas treatment element 35 is heated by the contact with the reaction products of the pyrotechnic material 21 and a portion of the second chamber contents released into gas flow communication with the diffuser chamber and filter 35 contact the heated filter and is heated thereby (inasmuch as in applicant's invention) (claims 43-44, 48-49). Regarding claim 50, the second chamber 14 includes an opening 10 closed in a static state by a seal 38 and the first reaction products propel the projectile 34 into the seal to rupture it.

Regarding claim 54, as noted above diffuser chamber 30 has discharge opening 32 effective to discharge gas into the airbag, and a pyrotechnic inflator device with a chamber 20 with heat producing pyrotechnic material 21 in on one end of the diffuser chamber 30 and pressurized gas chamber 14 is on the other end. In Figure 6, Yamazaki et al discloses gas treatment element 70b (note column 15, lines 10-15, where the holes 71 of member 70b perform a filtering function) in spaced relation to the stored gas chamber 14 and disposed in the diffuser chamber. Chamber opener 34 in Figure 6 is between the treatment element 70b and the stored gas chamber 14 to open the stored gas chamber. As noted above (claim 59), the filter 70b is heated by contact with the products of the pyrotechnic explosion and a portion of the gas from the second chamber contacts the heated element as functionally recited.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 32-37, 39-42, 45-47, 52-53, 55-57 and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al in view of Moore et al US006244623B1, of record.

As noted above, Yamazaki et al discloses first chamber 20 with pyrotechnic heat generating material 21, initiator 26 for the first chamber, diffuser chamber 30 with discharge holes 32, and filter or gas treatment element 35. Yamazaki et al does not disclose the second or stored gas chamber having nitrous oxide. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamazaki et al to include nitrous oxide and an inert gas in the stored gas chamber as taught by Moore et al in order to use a safe thermally stable material and supplement the gas produced or formed upon dissociation (Moore et al, column 8, line 60 to column 9, line 39), and in order to use a liquefied gas as already taught by Yamazaki et al above (i.e., Yamazaki et al discloses liquefied gas in the storage chamber 14 at column 9, lines 15-39, and Moore et al teaches that nitrous oxide liquefies easily at column 8, lines 60-65). In the combination also, Moore et al teaches at column 7, lines 44-45 that the gas is pressurized, hence teaching pressurized nitrous oxide (claims 32-33, 35, and 46). In the combination Moore et al teaches helium, an inert gas, in addition to the nitrous oxide in the chamber at column 9, lines 40-44 (claims 34, 45, 47 and 55-57). As noted above, Yamazaki et al teaches a projectile 34 propelled into seal 38 by the reaction products of the first chamber (claims 36 and 37). As functionally recited, in Yamazaki et al, the primary reference, filter 35 is heated by products from the first chamber 20 and contents from the second chamber 14 contact the heated element

(especially in Figure 6 of Yamazaki et al)(claim 39). In the combination, the nitrous oxide dissociates by the equation in column 9, lines 1-10 of Moore et al to form dissociation products with a second, higher molar content (2 moles of nitrous oxide dissociates into three moles of nitrogen and oxygen)(claims 40, 52 and 60). Yamazaki et al's chambers 14, 20 and 30 are longitudinally aligned (claims 41 and 61). Disposing the chambers 14 and 20 side by side adjacently instead of longitudinally aligned would be an obvious matter of design choice, as case law holds that there would be no invention in shifting parts to a different position since the operation of the device would not thereby be modified (In re Japiske, 86 USPQ 70 (CCPA 1950))(claims 42, 53 and 62).

5. Claims 51 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al in view of Haland et al (US Patent 5,788,270, of record).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamazaki et al to include a side bag curtain as taught by Haland et al in order to protect occupants in a side collision.

6. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki et al in view of Moore et al as applied to claim 32 and further in view of Haland et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yamazaki et al and Moore et al to include a side bag curtain as taught by Haland et al in order to protect occupants in a side collision.

Response to Arguments

7. Applicant's arguments with respect to claims 32-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Culbreth whose telephone number is 571/272-6668. The examiner can normally be reached on Monday-Thursday, 9:00-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571/272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Eric Culbreth
Primary Examiner
Art Unit 3616



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REPLACEMENT SHEET

Serial No.: 10/669,884

Sheet 1 of 1

Approved
EC 7/4/06

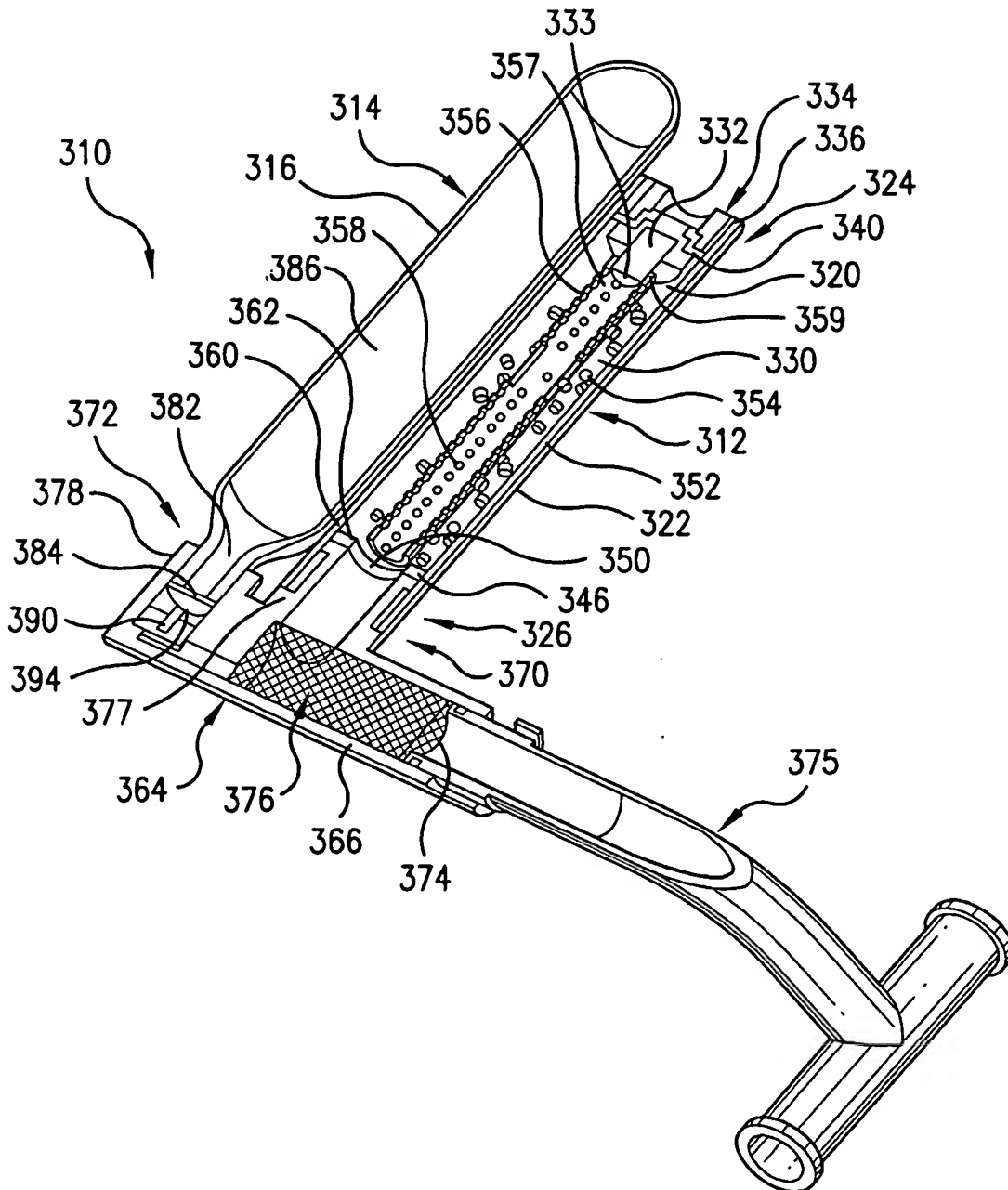
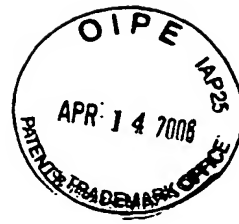


FIG. 6